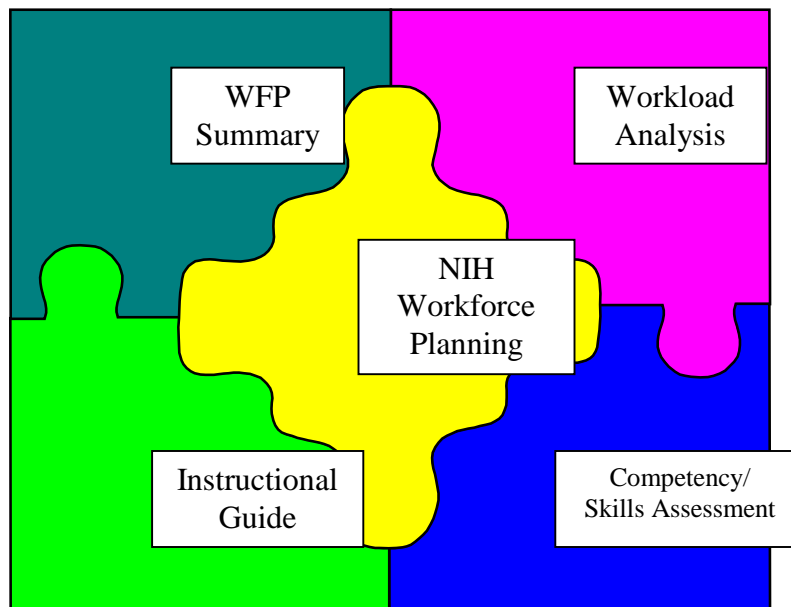


# NATIONAL INSTITUTES OF HEALTH

## ***WORKFORCE PLANNING INITIATIVE***



**OFFICE OF HUMAN RESOURCES MANAGEMENT  
OFFICE OF THE DIRECTOR**

**OCTOBER 1999**

Workforce planning can be very simple or very complex depending upon the needs of the organization. It is a multifaceted and dynamic process that requires information from a variety of sources.

The charge to the OHRM Workforce Planning Team was to develop a “How-To-Guide” on workforce planning. Because a “How-To-Guide” cannot be all things to all people, we have provided a briefing summary and general information on other processes that are equally important to workforce planning but separate processes. Each section is intended to be a stand alone document to be used as appropriate.

# ***WORKFORCE PLANNING SUMMARY***

## **Workforce Planning Summary/Briefing Document**

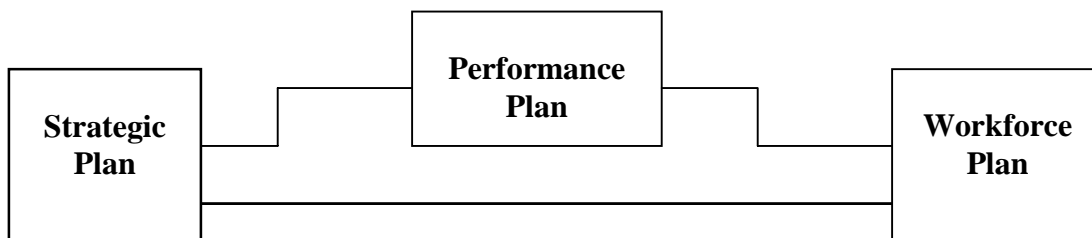
This section has been designed to provide conceptual information about workforce planning for use in briefing senior management officials.

### **WHAT IS WORKFORCE PLANNING?**

**Workforce Planning (WFP) ensures that “the right people with the right skills are in the right place at the right time.” This definition covers a methodical process that provides managers with a framework for making human resource decisions based on the organization’s mission, strategic plan, budgetary resources, and a set of desired workforce competencies.**

Planning for human resource needs is one of the greatest challenges facing managers and leaders. In order to meet this challenge, a uniform process that provides a disciplined approach for matching human resources with the anticipated needs of the National Institutes of Health (NIH) is essential.

Workforce planning is a fundamental planning tool, critical to quality performance that will contribute to the achievement of program objectives by providing a basis for justifying budget allocation and workload staffing levels. As NIH develops strategies to support the achievement of both long-term and annual performance goals in the strategic plans, workforce planning should be included as a key management activity. WFP must be directly linked to a broad-based management strategy that encompass several processes.



It is a dynamic process that facilitates planning for different scenarios. Thus, it can be as complex or as simple as the organizational needs dictate. An organization may choose to conduct workforce planning in a laboratory versus a functional area or a division versus the entire organization. Similarly, it is critical to conduct workforce planning during times of budget reduction as well as budget increases. Staff reductions and increases without any planning in conjunction with the organization’s mission will only lead to the inability to fulfill staffing goals.

## Essential Organizational Elements

In order to achieve the optimum WFP product, the following have been identified as being essential organizational elements which provide a framework for effectively carrying out WFP activities:

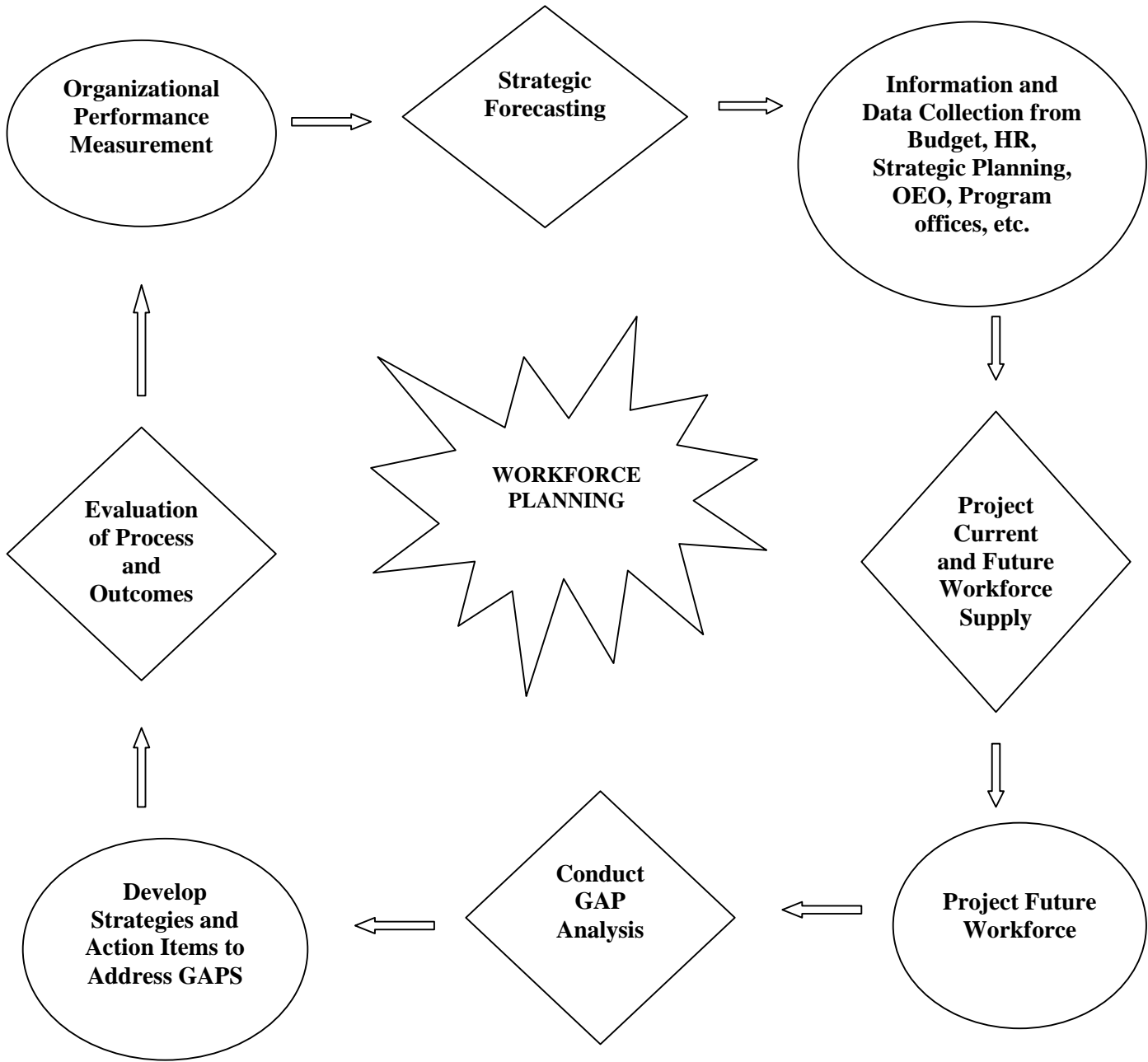
- Top management support
- Accountability at all levels
- Integration of other planning processes with WFP
- A simple, systematic and well-documented process

## Components of Workforce Planning

A review of several models has shown that, although WFP will vary depending upon the needs of an organization, the general processes appear to be alike. All rely on:

- **Integration of other planning processes.** In particular, strategic planning, budget, and human resources are key players in workforce planning. The strategic plans required by the Government Performance and Results Act (GPRA) identify organizational direction and articulate measurable program goals and objectives. The budget process provides information on the allocated funding to achieve objectives. Human resources provides tools for identifying skills needed in the workforce, recruiting, career development, training, retraining, etc. in order to build the workforce of the future.
- **Workforce Supply** - Analysis of projected workforce supply based on projected retirements and attrition data on the current workforce
- **Forecast Workforce Need** - Identification of skills needed in the future;
- **Gap Analysis** - Comparison of the present workforce to future needs to identify skill gaps and surpluses;
- **Strategies** - Development of strategies and action items to address needed or surplus skills
- **Evaluation** - A dynamic evaluation process that ensures the workforce model remains valid and that objectives are being met in support of the organization's performance goals.

**WORKFORCE PLANNING MODEL**



## WORKFORCE PLANNING MATRIX

Activity	Input	Outputs	Participants
Supply Analysis	<ul style="list-style-type: none"> <li>• Workforce demographic and transaction data</li> <li>• Workforce skills/experience data collection; workload measurement inputs</li> </ul>	<ul style="list-style-type: none"> <li>• Workforce profiles (such as age, grade, service, occupation, permanent /temporary tenure, supervisory ration, and diversity</li> <li>• Trends/predictors (such as turnover, retirement rates, and replacement patterns</li> <li>• Workforce skills inventory; workload measurement data</li> </ul>	<ul style="list-style-type: none"> <li>• Senior Management</li> <li>• Program Managers, supervisors and staff</li> <li>• HR Office</li> <li>• Union representation</li> <li>• Optional: contract support; internal consultants</li> </ul>
Needs Analysis	<ul style="list-style-type: none"> <li>• Management assessment of program direction</li> <li>• GPRA Objectives</li> <li>• Strategic Plans</li> <li>• Budget Plans</li> </ul>	<ul style="list-style-type: none"> <li>• Future workforce profile; skills numbers, levels</li> </ul>	<ul style="list-style-type: none"> <li>• Senior Management</li> <li>• Program managers and supervisors</li> <li>• GPRA planning staff (if separate), budget formulation staff; HR Office</li> <li>• Optional: contract support; internal consultant</li> </ul>
Gap Analysis	<ul style="list-style-type: none"> <li>• Supply Analysis data; Demographics, employment trends; skills inventory</li> <li>• Needs Analysis data; Future skill needs; staffing levels</li> </ul>	Analysis of differences between current workforce and future needs; priorities for addressing change	<ul style="list-style-type: none"> <li>• Senior Management; Program Managers; supervisors</li> <li>• GPRA/Strategic Planning staff; HR staff</li> <li>• Optional: contract support; internal consultant</li> </ul>
Solution Analysis	<ul style="list-style-type: none"> <li>• Output from Gap Analysis; Identified “gaps” between current workforce and workforce needed for the future</li> </ul>	<ul style="list-style-type: none"> <li>• Strategies / options for workforce transition</li> <li>• Analysis of interventions needed for transition</li> </ul>	<ul style="list-style-type: none"> <li>• Senior Management; Program Managers; Supervisors</li> <li>• HR Office</li> <li>• Optional: Contractor support; internal consultant</li> </ul>

Source: HHS

## Functional Considerations

In conducting workforce planning, there are functional considerations that must be decided. The two most important are:

- **Planning Time Frame:**

Organizations need to consider how far into the future to project when carrying out workforce planning. Managers need to balance the certainty of short-range planning against the need to plan for longer-range objectives. Longer time frames may provide more flexibility in planning workforce transitions but also will require regular validation of the analysis of future workforce needs. Shorter time frames run the risks of requiring more drastic workforce transition management and of missing coming changes by not looking far enough into the future. A three to five year time frame for workforce planning generally will provide a reasonable balance between the two extremes.

- **Planning Levels**

What is an appropriate organizational level for developing a workforce plan? There is no single answer to the issue of appropriate planning levels. The most useful guideline in determining planning levels is to make sure that the outputs of workforce planning will relate to organizational or programmatic strategic objectives. This would point to carrying out workforce planning at the program-level basis, or for staff organizations on a functional level basis.

A workforce-planning model should provide flexibility to NIH institutes, Centers, and Offices to adapt models to their own organization. This includes the flexibility to determine planning levels that make managerial sense and that support strategic plans objectives. The size of an organization, how it is organized, how programs are managed, and budgeted, all will impact on determining workforce-planning levels.

## WHY DO WORKFORCE PLANNING?

As a manager, there are multiple reasons to conduct workforce planning:

- **DHHS Expectations.** In FY 1999, HHS will spend approximately 5 percent of its discretionary budget, nearly \$2 billion, on personnel compensation. The emphasis in budgeting has shifted from workforce reductions to workforce management. The Office of Management and Budget (OMB) is increasingly emphasizing the link between dollars and personnel and asks that agencies accompany staffing requests with documentation that ties these requests to overall staffing goals.

In order to meet this requirement, as well as present strong justification to appropriations, the HHS Budget Office has asked HHS Operating Divisions to apply workforce planning methods and techniques in developing staffing requirements. The expectation is that OPDIVs will include the outputs of workforce planning (including their workforce analysis) as supporting documentation in their budget justifications. The goal is to combine budget, program performances, and staffing priorities into a cohesive strategy that is presented in budget justifications.

- **Strategic basis for human resource decisions.** WFP helps the organization as a whole forecast future conditions and develops objectives for the scientific programs to meet the NIH/ICs' needs. It allows managers to anticipate change as well as provide strategic methods for addressing present and anticipated workforce issues. Changes in skills and key positions can be anticipated as a result of retirements and natural attrition.
- **Links expenditures to organization's long-term goals and objectives.** Human resources are expensive. The higher the percentage of the budget which is comprised of human resources-related costs, the more important is the need to plan. The cost of turnover, replacement, and retraining further increases these costs. WFP can reduce these costs by ensuring more efficient and effective recruitment and retention. It will also provide other benefits such as background information for position management and succession planning; better identification of training and development needs for the long-term; linkage of training with performance goals; more cost effective programs; more useful information on EEO and workforce diversity.
- **Links recruitment, development and training decisions to organizational goals.** WFP provides a clear rationale for linking expenditures for recruitment, training, employment development, and other human resource programs. The Government Performance and Results Act of 1993 forces organizations to accomplish and base future budgetary decisions on achieving these goals.

This is also emphasized in the General Accounting Office study, "Major Performance and Management Challenges", which notes: "Only when the right employees are on board and are provided the training, tools, structures, incentives, and accountability to work effectively is organizational success possible."

- **Address changes in program direction** that impacts the type of work being performed and/or how the work is being performed. WFP allows managers to identify ways in which technology and other business changes impact the skills required in the workforce.

Automation will continue to have a profound impact on the way we do business. It will enable us to conduct our business with ever increasing efficiency. Advances in computer hardware and software will allow us to extensively use interactive and intelligent systems. Major changes to the personnel data system, office processes, and training methods can be expected.



# ***Workforce Planning Instructional Guide***

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# ***Introduction***

## **Audience**

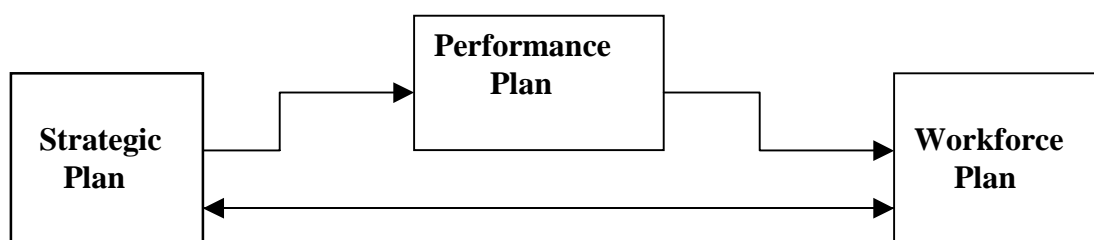
This manual is written for staff members who are tasked with developing a workforce plan. This manual provides information and processes that can be applied to ensure a systematic approach to workforce planning. It defines fundamental steps to develop and implement workforce plans as well as identifies tools available to assist managers and leaders in the overall process. However, there may be varying levels of understanding, varying reasons to conduct workforce planning, and varying qualities of information available within an organization. As such, whole or parts of this manual should be followed as much as the workforce planners feel is necessary to accomplish their task, regardless of the complexity.

To help the user understand how to apply each step outlined in the manual, we have included a copy of a model workforce plan in Appendix A for process steps 1-5. We recommend that each user refer to this example for further clarification as you proceed through the steps.

## **What is Workforce Planning?**

Planning for human resources needs is one of the greatest challenges facing managers and leaders. In order to meet this challenge, a uniform process that provides a disciplined approach for matching human resources with the anticipated needs of the National Institutes of Health (NIH) is essential. Workforce planning is key to planning for these needs.

Program goals will not be achieved without having “***the right people with the right skills in the right place at the right time.***” Workforce planning is a fundamental tool, critical to quality performance, that will contribute to the achievement of program objectives. As NIH describes the strategies that support the achievement of both long-term and annual program performance goals in the strategic and performance plan, activities such as workforce planning should be included as an essential component of a broad-based management strategy.



The following are common reasons to conduct workforce planning:

- Helps meet the organization's need
- Provides focus for workforce demographics, retirement projections, and succession planning.

- Provides a clear rationale for linking expenditures for recruitment, training, employee development, and other human resource programs to the organization's long-term goals and objectives
- Provides managers with tools to address changes in program direction that impacts that type of work being performed.
- Assists managers in creating a high quality workforce capable of continually growing and changing.

### **Key Elements**

Although many approaches and techniques exist for doing workforce planning, the following have been identified in literature as being essential organizational elements which provide a framework for effectively carrying out workforce planning activities. The workforce plan should:

- Reflect the management and organizational culture of the organization
- Have top management support
- Integrate other planning resources into the process
- Be user-friendly and systematic
- Seek accountability for results at all levels

### **Key Steps:**

The following are the steps that lead to a full workforce analysis:

1. Data Collection
2. Determining Future Needs
3. Assessing the Current Workforce
4. Gap Analysis
5. Strategy Development
6. Review of Outcomes
7. Process Evaluation

# Preliminary Preparation

## 1. Identify Parameters

Regardless of how complex or simple workforce planning will be in an organization or unit, it will require input from a variety of functional areas and levels such as executive officers, administrative officers, scientists, researchers, program managers, human resources, budget and finance, unions, and strategic planners, etc. Ideally, a multidisciplinary team should be identified by leadership to conduct workforce planning. However, one individual may also be tasked with this responsibility. Before you began conducting your analysis, you should begin with the following (or use ones that are more applicable to your organization) parameters regardless if it is a team or one individual:

- Begin with a set of assumptions that set the scope of workforce planning within an organization.
- Clearly understand why you are doing workforce planning
- The capacity to do effective workforce planning will only be developed over time. The time needed to conduct workforce planning will vary depending on the scope of the WFP plan. It is critical to begin carefully and to validate the analysis at each step. It may be helpful for an office to begin with a subset of the workforce such as a laboratory section or staff clinicians and extend planning through the remainder of the organization.
- Identify resources available.
- Adapt models, strategies, tools, and processes to your organizational environment and needs. Concentrate on planning outputs that are organizationally meaningful and which support program objectives, budget requests, staffing requests, and strategic plans. Training, coaching, technical assistance and other support will be required as offices prepare to use models, strategies, and tools.

After you have either adopted these parameters or developed your own based on your organization, you should discuss them with top management to ensure their support.

## Key Players

Now that you have established the parameters for the workforce-planning project, you should begin assembling the team of professionals to participate in the workforce study. At the very least, you will need specialists from human resources, financial management/budget, program areas, and a management analyst to assist you. If working alone, notify subject-matter officials of this task and request their assistance when needed. Leadership should appoint specific offices and individuals to serve as key players, including employees from any targeted occupational groups that the plan is examining. This is also the time to discuss the roles, responsibilities, and commitment of each team member. The following information should be addressed for each team member:

- ◆ Name of each member
- ◆ Occupational group represented
- ◆ Specific role

- ◆ Responsibility
- ◆ Time committed to projected

You are now ready to begin conducting a workforce plan according to the following steps that are outlined in the remainder of this Guide. Again, be sure to refer to the Sample Workforce Plan in Appendix A when you need clarification of Process Steps 1-5.

## **1.0 Data Collection – *Step one***

Workforce planners must gather a variety of information and data in order to conduct comprehensive workforce planning to determine future needs as well as the projected workforce supply. In order to paint the picture of the future, you should begin by:

- (1) Examining planning documents (Strategic plans, performance plans, etc.)
- (2) Reviewing current and projected financial/budget information
- (3) Determining major planning issues (external influences, trends, and anticipated changes in budgets)
- (4) Developing assumptions and setting objectives accordingly.

The following sections will guide you in collecting all the data you will need to proceed with the other steps in conducting a workforce plan analysis.

### **1.1 Define Scope of Data and WFP for Organization**

Understand the scope of your study and exactly what information will help you develop a full workforce plan. It is recommended that you begin by identifying the Scope of Data and Scope of the Organization as outlined below:

#### **SCOPE OF DATA**

- ◆ Will the workforce plan focus on the entire organization, sub-unit, specific occupation, or functional area?
- ◆ Determine the number of years for which the workforce planning process will make projections.
- ◆ Determine whether the “workforce” includes permanent, temporary, Commissioned Corps, nonFTEs, contractors, volunteers, etc,
- ◆ Do you plan to examine diversity and/or cultural issues?
- ◆ Identify baseline human resource and financial data, such as annual and projected budgets, FTE, etc., that will be used for the analysis.

The answer to the above questions will help you define the scope of your workforce analysis. This is a critical step in the beginning stages of understanding your workforce dynamics. While no formal protocol exists for capturing this information, it is recommended that these answers be documented as a section of the plan for future reference.

### **1.2 Collect Existing Documents**

You will need to collect as many of the following documents/reports to assist you with understanding your organization’s vision, outlook, and overall workforce dynamics:

- ◆ Strategic Plan(s)<sup>1</sup> including Mission Statement
- ◆ Organizational Performance Plan(s)

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<sup>1</sup> Valuable data that will be used in the workforce planning process will be obtained directly from the strategic plan. Therefore, the creation and implementation of a strategic plan should be completed for effective workforce planning. However, in the absence of a strategic plan, use any other planning documents that are available and consult with senior managers to obtain the organization’s vision and mission

- ◆ Financial Report(s)
- ◆ Budget Reports
- ◆ Vision Statement
- ◆ Organizational Long/Short term goals
- ◆ Organizational Objectives
- ◆ Affirmative Action Reports
- ◆ Workload Reports
- ◆ All Organizational Studies
- ◆ Organizational Chart
- ◆ Staffing Plans

Once you have collected these documents, follow the instructions to analyze each document. This information will be referred to throughout the processes and will be the driving force behind each step and strategy hereafter.

### **1.3 Examining the Data**

You will need to examine and analyze the data to determine future needs, changes, and direction within your organization. To assist in analyzing the data you have collected, answer the following questions using the information you have collected.

#### ***QUESTIONS THAT WILL IMPACT THE ANALYSIS***

- (1) What changes are anticipated over the next \_\_\_\_\_ years regarding:
  - ◆ Mission, base functions, strategic goals and objectives, operational goals, etc.
  - ◆ Budget, trends and patterns. Do projected funding levels support positions and objectives? Are there any changes to our philosophy or approach to budgeting?
  - ◆ Impacts of internal and external environment (legislative changes, Departmental initiatives, social and economic trends.
  - ◆ Planned FTE reductions or increases (what career fields, how many, etc.)
  - ◆ New technology innovations
  - ◆ Changes in organizational structures
  - ◆ Outsourcing
  - ◆ Privatizing elements of divisions
- (2) How will these changes affect:
  - ◆ The volume, type and location of work to be performed
  - ◆ Organizational structure and design
  - ◆ Mix of skills
  - ◆ Supervisory/manager employee ratios
  - ◆ Increasing/decreasing workforce staffing levels (FTEs and nonFTEs).
- (3) What is the planned organizational outlook for the future and how do you plan to meet those goals? Examine the workforce by analyzing:
  - ◆ The number of FTE's needed in what organization and with what skills and competencies and by when?
  - ◆ Number needed at each level of expertise (experts, mid-level, trainees)

- ◆ Number of supervisors/non-supervisors
- ◆ Number of types of teams
- ◆ Diversity objectives

This information will be needed when you are determining your gap (Step 4.0) and analyzing strategies and action items to address those gaps.



## **2.0 Assessment of Current and Projected Workforce – *Step Two***

This section will focus on gathering information to analyze how the projected workforce supply will look by applying projected retirements to the current workforce. It will be based on workforce demographics and employment trends. The demographics include occupations, grade levels, organizational structure, race/national origin, gender, age, length of service, retirement eligibility, and similar information and will provide the necessary baselines for analysis. This trend analysis provides both descriptive and forecasting models which describes how turnover will affect the workforce in the absence of management action. This analysis can provide powerful predictors of how many employees will actually retire, resign or transfer. Workforce demographics data will provide a snapshot of your organization by organizing workforce data from the Human Resources database (HRDB) or Data Warehouse.

### **2.1 Data Assessment By Occupational Series**

In order to analyze your current workforce and obtain a snapshot of your organization, you will be collecting data, as applicable, for each occupational series or for significant occupational series to determine the following:

- 1) How many employees and organizational level?
- 2) What is the grade structure for this series?
- 3) What is the average education level for employees in this field?
- 4) What is the turnover rate? Are employees leaving NIH to transfer to other Federal agencies or private organizations?
- 5) Are employees in this field moving around within NIH?
- 6) What is the predicted retirement count for the next five year?
- 7) Are employees retiring when eligible?
- 8) What is the average age of retirement?
- 9) What are the gender/racial statistics for this field?

### **2.2 Data Collection Method**

Information needed to analyze the workforce and answer all the questions cited above is available through electronic systems, such as the HRDB and through the NIH's Data Warehouse system.

Using the information below, you can obtain data sufficient to determine turnover rates, analyze retirement trends, anticipate future retirements, analyze the current total workforce, determine recruitment practices, and provide a snapshot of the entire series:

**Steps for Collecting Data:** – Obtain an electronic human resources report and requesting it be e-mailed from the HRDB system that includes the following data elements:

❖ **Title:**

The title of each position within a career field will be listed.

❖ **Series:**

Information for the entire occupational series will be available, allowing you to analyze each occupation within the series separately or together.

❖ **Grade:**

This field allows you to analyze the current grade structure, percentages of higher grades versus lower grades, average length of service in a grade and the average grade of retirees.

❖ **Date of Birth (DOB)**

The DOB is needed to analyze retirement eligibility, average time-in-grade and age of new hires, retirees, etc.

❖ **Service Comp Date (SCD):**

SCD data is critical for analyzing retirement trends and years of experience for employees in certain grades and series

❖ **Gender:**

This information is useful in determining the gender structure of the career field, the typical hiring trends of males and females, and the career paths of both.

❖ **Race and Origin (R/O):**

❖ **Nature of Action Code (NOAC):**

The NOAC will give you inclusive information regarding promotions, reassignment, lateral moves, accessions, conversions, and separations. You can then analyze trends for hiring, promotions, retirements and employee movements within NIH, either individually or grouped by series.

The Division of Workforce and Measurement has already set-up reports from HRDB that provide the information needed as cited above, with the Division of Human Resource Management, Customer Support Center. These reports have already been created for your use (using the information fields identified above) and you can have easy access to them by simply requesting report numbers: **5462 and 5469C**. However, when requesting these reports, you will need to update the “series” field to the one applicable to your analysis and use your organization code

## **2.3 Data Analysis**

Now that you have collected the information above, you are now ready to begin analyzing this information to answer the questions outlined in Section 4.1. In order to analyze the data requested from the HRDB, the information can be electronically transmitted to a statistical software package, such as SPSS or SAS. You can also elect to do the statistics manually. This electronic process requires transferring data from E-mail into any spreadsheet, such as Excel or Lotus and then imported into SPSS or SAS.

Follow these steps to prepare your data for analysis of your current workforce:

- a. Information is transmitted from the HRDB system to the E-mail system.
- b. From e-mail: copy data (select, copy and paste) into a spreadsheet (either Excel or Lotus)
- c. In Excel or Lotus: block the data – then convert data to columns by choosing the following from the file menu: **Data – Text to Columns – Next - Finish**. This allows the data to be transferred into SPSS. The columns will then be divided by each data element.
- d. Once data has been converted to columns, block and copy all the text (or data).
- e. Then, open up a new SPSS worksheet
- f. In SPSS, name the variable (or columns) the same as they appear in Excel or Lotus. For example: If the order of data elements is “grade, series, DOB, etc.”, then SPSS should be named exactly the same (grade, series, DOB, etc.).
- g. After the columns are named, paste the data from Excel to SPSS. This creates a smooth transmittal of data because both columns match.

You are now ready to begin analyzing the data.

## **2.4 Conduct Skills Analysis**

In order to understand whether your organization will have the skills needed in the future, you need to determine the skills of the current workforce.

Two key elements in identifying skills are:

- ◆ Workforce skill analysis, a process that described the skills required for today's work.
  - Conducting workforce skill analysis requires the leaders of an organization to anticipate how the nature of the organization's work will change, and then to identify future human resource requirements. (The process spans the supply analysis and demand analysis aspect of workforce planning).
- ◆ Job analysis, which collects information describing successful job performance.
  - Job analysis focuses on tasks, responsibilities, knowledge and skill requirements as well as other criteria that contribute to successful job performance. Information obtained from employees in this process is used to identify skills.

***Follow the steps outlined below to conduct a skills analysis:***

1. Identify the job skills that will be required for future positions in your organization.  
A matrix can be used as a tool for identifying the skills that are or will be required for specific positions. This step will likely have been done at some point in the strategic planning, prior to the gap analysis.
2. Determine whether current employees possess the skills that will be required by the identified positions.  
This is the data likely to be missing other than in anecdotal ways or based on assumptions related to current grade and series. A skills assessment tool can be used to measure individual employee competencies.
3. Analyze the difference (if any) between current employee skills and future organizational needs.

The results of the skills analysis will help to identify potential retraining needs that employees in certain "excess" or "surplus" positions may require in order to transition into other positions within the organization.

Note: Many competency and skills analysis models, including automated tools, are available through commercial vendors.

## **2.5 Documentation of Projected Workforce**

After determining the projected workforce that your organization will have based on retirements and natural attrition, complete the "Projected Supply" columns on the Gap Analysis Form in Table 4.1 contained in Step Four.

## **3.0 Projected Workforce Needs – *Step Three***

The information collected in Step 1 will be used in this step to determine your organization's future needs in terms of specific skills needed, FTE's, etc. The mission, vision, goals, and objectives of the organization, which you have already identified in the previous steps, help define the workforce needed in the future.

An important part of the future needs forecasting process is the examination of the anticipated occupations needed, work an organization will do in the future, and how that work will be performed. In particular, computer systems and Internet technology will continue to impact how individuals and organizations perform in the future. To determine the organization's future needs, list the skills that will be needed based on the strategic plan, technology innovations, etc, based on the information collected in Step 1. Coordinate with a human resources management specialist who can identify the relevant series based on the skills needed.

### **3.1 Identifying changes**

The following questions will assist in identifying anticipated changes:

- 1) What changes are expected over the planned time period in mission, functions, strategic goals, and objectives? Will the program or organization's method of doing business change?
- 2) What are the budget trends and patterns?
- 3) Do projected funding levels support positions and objectives?
- 4) Are there any changes expected in the number of FTEs?
- 5) What factors in the internal and external environment will impact decisions (legislative changes, departmental initiatives, social/economic trends, etc.)
- 6) What is the nature of the work to be done, in terms of volume, location and duration?

### **3.2 Impact of Changes**

Once you have identified the anticipated changes, ascertain how these changes will affect:

- ☐ The amount, type and location of work to be completed.
- ☐ Organizational structure and design
- ☐ The mix of skills
- ☐ The supervisors/manager to non-supervisory employee ratio
- ☐ Diversity initiatives
- ☐ Increasing/decreasing workforce demands

### **3.3 Documentation of Projected Need**

Document your projected need by title, series, grade, and location, on the Gap Analysis form contain in Table 4.1, in Step Four.

## **4.0 Gap Analysis – *Step Four***

The gaps are identified as result of an analysis of the differences between the forecasted human resources needs and future human resource supply. This analysis reveals human resources surpluses and deficits in raw numbers, and will assist you with further planning for addressing these gaps.

### **4.1 Gap Analysis Form**

If you have not already completed the Projected Need and Projected Supply on the Gap Analysis Form as indicated in the previous steps, complete the following form to identify gaps in meeting your future and current workforce needs.

### **4.2 Gap Calculation**

Calculating the gap is important for identifying personnel and/or skills in the current workforce that will not meet future needs- need *exceeds supply*. It will determine whether the current workforce exceeds the needs of the future – *supply exceeds need*. There are also situations where the supply will meet the future needs, thus resulting in no gap or a difference between supply and need of zero. Depending upon how the supply and needs were determined and the level of specificity, the gap can be identified by specific title, series, grades, locations, etc. or any variation needed. The comparison requires that the skills sets developed in the supply analysis and demand analysis phase need to be comparable – not independently developed.

### **4.3 Gap Prioritization**

Once you have identified the Gaps between the future needs and projected workforce supply, you will need to consult with management to prioritize the significant gaps that have the most impact on organizational goals. Be aware that management may decide that having large “gaps” in particular series or skills may not be as important as planning for the anticipated retirement of a subject expert.

<b>GAP ANALYSIS FORM</b>
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[illegible]

## 5.0 Strategy Development - *Step Five*

### 5.1 Strategic Methods for Addressing Gaps

You can now begin developing strategies and action items for addressing those gaps. When developing strategies, these are examples of some issues to consider:

- ◆ The cost associated with the strategies for addressing competency or skill gaps
- ◆ Are there ways to maximize recruitment in order to minimize training needs of new employees?
- ◆ Explore retraining or recruiting options for filling competency gaps.
- ◆ What retention strategies are necessary and most feasible?
- ◆ Are there alternative training mechanisms?
- ◆ Can needed skills be obtained through sharing of resources?
- ◆ Cost-effectiveness of contracting
- ◆ Implementation of career development programs

### 5.2 Identify and Prioritize Gaps

As stated in the previous section, prioritize and identify critical positions. Then, determine how each position will be filled.

### 5.3 Identify Strategies and Action Items

Determine strategies and specific action items to address gaps. Strategies are broad categorical statements whereas action items identify the specific person(s) responsible for implementing the strategy and when it will be accomplished. Examples of types of strategies to consider for addressing gaps include:

*Strategy: Addressing Gaps with Surplus workforce*

- ◆ Review the list of surplus positions available as outlined on your gap analysis worksheet. Then, review the skills of each of those positions. Once you have this analysis done, determine which positions can transition into the gaps to be filled. To do this, consider; (1) are these skills transferable to the positions to be filled? (2) can any of the positions to be filled be converted to training positions (career development)?
- ◆ After you have identified positions to be filled and surplus positions, identify and document: (1) positions that can be converted into trainee positions (2) positions with the same skills needed; (3) positions that can be easily reclassified to the positions needed.

*Strategy: Partnership with academic institutions with high minority enrollments*

This action item(s) could indicate that you will establish a memorandum of understanding with a Historically Black Colleges and Universities (HBCU) or Hispanic Association of Colleges and Universities (HACU), etc., institution as a means to develop a minority pool of researchers.

*Strategy: Increase use of appointing authorities for recruitment*

- A. Intergovernmental Personnel Act (IPA) authority: Action item could indicate that you will increase the use of IPAs to bring molecular biologists and biomedical information system researchers from universities
- B. Titles 42: Action item could indicate that you will use Title 42 or Senior Biomedical Research Service
- C. Title 38: Action item could indicate increased use of Physician Special Pay to attract clinicians

*Strategy: Use a variety of mechanisms to recruit and retain staff*

- A. 3 R's: Action item could indicate use of recruitment and retention incentives as appropriate
- B. Mentoring: Action item could indicate the development of a formal mentoring program for trainees and junior scientists
- C. Use of flexible work schedules and telecommuting as appropriate



## DEVELOPMENT OF STRATEGIES AND ACTION ITEMS

**Reporting Unit:**[illegible]

## **6.0 Evaluation of Outcomes – *Step Six***

### **6.1 Review of Outcomes**

The WFP plan, especially the strategies and action items, should serve as a roadmap for managers to ensure the right people are in the right locations at the right time in order that the organization's long-term and short-term goals are achieved. The outcomes should be continuously evaluated to determine progress in addressing the gaps and where adjustments to the strategies and action items are needed.

### **6.2 Assessing Accomplishment and Effectiveness of Outcomes**

There are many different methods to obtain feedback concerning the achievement of accomplishments and the effectiveness of outcomes. This information can be obtained via meetings, surveys, focus groups, review of accomplishment reports, etc. Regardless of the method, examples of questions to ask in order to determine whether the strategies and action items are effective include:

- Were the actions and strategies completed and do they fulfill the goals?
- Did the action plan accomplish what was needed?
- If not, have the organization's strategies upon which the plan is based changed? Were there other factors preventing the obtainment of the goal?
- Are the assumptions of the need and supply models still valid?
- Have the conditions changed such that the strategies need to be revisited?
- Is there a need to modify the action items?

### **6.3 Addressing Need for Adjustments to Strategies and Action Items**

After the above analysis has been conducted, steps should be taken to remedy problems in implementing action items. Examples include:

- Timeframe for implementation of action items may need to be changed
- Content of action items may need to be adjusted
- Deletion of action items because they may no longer be valid and/or feasible, e.g. budget, reorganization, etc.
- Persons responsible for action item may need to be changed

### **6.4 Communicate Changes**

Changes to the action items must be communicated to responsible individuals in a timely manner to allow for questions and clarification. Similarly, achievement of action items should be reflected in the organization's annual accomplishments and ultimately the fulfillment of strategic goals.

## **7.0 Process Evaluation – *Step Seven***

### **7.1 Dynamic Review of Process Steps**

The WFP process is a continuous process of forecasting, clarifying, and identifying organizational workforce needs, assessing competencies, and implementing appropriate interventions. The process should be continuously evaluated to determine how well each of its component parts are functioning and where adjustments are needed.

Feedback should be obtained from participants and customers, including managers and top level officials to determine the effectiveness of the WFP process in producing a useful product. This information can be obtain via a variety of information gathering methods such as interviews, focus groups, surveys, etc.

### **7.2 Determining Effectiveness of Process Steps**

Feedback should be obtained from participants and customers, including managers and top level officials to determine the effectiveness of the WFP process in producing a useful product. This information can be obtain via a variety of information gathering methods such as interviews, focus groups, surveys, review of the quality of the workforce plan, etc. When ascertaining the effectiveness of the WFP process, examples of questions to ask include:

- What was expected from this process?
- Did this process produce a plan that is useful to managers in support of the organization's strategic goals?
- What worked and why?
- Did the process work well as a team effort?
- If some of the steps did not work, how did you proceed?
- What didn't work and how could it be improved?
- Was there enough time to conduct WFP?
- Were the appropriate offices involved?
- Were adequate resources provided?

In addition there may be external and internal forces at any time that may precipitate changes to the process. Examples of these include reorganizations, redistribution of resources, new and/or changes to information data systems, budgetary and strategic planning cycle changes, etc.

### **7.3 Communicate Changes**

1. Appropriate actions should be taken to address process inefficiencies.
2. Any changes to the processes and subsequent impacts should be fully discussed and analyzed with the multi-disciplinary team to ensure the changes do not create unforeseen roadblocks.
3. Modifications to the processes should be communicated to everyone as soon as possible to ensure sufficient time for training and/or questions.

## 8.0 Summary

The following is a checklist that summarizes key elements of effective workforce planning.

1. **Vision.** Identify the IC direction. Project the organizational configuration \_\_\_\_years from now. Review and analyze the following:

A. Program Plans for the future.

- \_\_\_\_ Anticipated program/mission changes
- \_\_\_\_ Anticipated volume, type and location of work to be done
- \_\_\_\_ Changes in organization/position structures
- \_\_\_\_ Past patterns/trends
- \_\_\_\_ Anticipated supervisory/managerial strengths
- \_\_\_\_ Skill mix of workers
- \_\_\_\_ Increasing/decreasing workforce demands

B. Budget Situation.

- \_\_\_\_ Anticipated ceiling, budget philosophy, or goals
- \_\_\_\_ Funding levels
- \_\_\_\_ Trends/Patterns

C. Anticipated Environment (Internal/External) Factors

- \_\_\_\_ Legislative changes
- \_\_\_\_ Technological changes
- \_\_\_\_ Social changes

2. **Current Resources.** Determine the future availability of current workers by doing the following tasks:

A. Conduct work force analyses.

- \_\_\_\_ Potential losses of current employees
- \_\_\_\_ Turnover data, retirement rates, retirement projections, promotion and award rates, etc.
- \_\_\_\_ Organization/position structures
- \_\_\_\_ Vacancies that would be created by internal movement
- \_\_\_\_ EEO profiles
- \_\_\_\_ Supervisory/non-supervisory ratio data

3. **Needed Resources.** Identify anticipated shortfalls which need to be addressed.

A. Forecast specific needs in light of mission needs and vision.

Forecast overall numbers by occupations

- \_\_\_\_ By grades
- \_\_\_\_ By location of positions if applicable

B. Compare current available resources with needed resources for the future.

- \_\_\_\_ Net human resource needs
- \_\_\_\_ Increase/decrease in productivity levels
- \_\_\_\_ Skills/grade levels
- \_\_\_\_ Position management
- \_\_\_\_ EEO profile
- \_\_\_\_ Under staffing or over staffing
- \_\_\_\_ Career progressions
- \_\_\_\_ Supervisory/managerial replacements

4. **Action Plan.** Determine how your needs will be met by:

A. Addressing serious shortfalls and critical issues. Establish human resource objectives

B. Develop an action plan.

- \_\_\_\_ Internal sources of workers
- \_\_\_\_ Recruitment for external sources of workers
- \_\_\_\_ Job redesign
- \_\_\_\_ Training, retraining, career development
- \_\_\_\_ Succession planning
- \_\_\_\_ Contracting out
- \_\_\_\_ Productivity improvement
- \_\_\_\_ Restructuring (organization/positions)
- \_\_\_\_ Position management plan

C. Develop a plan for handling Labor Management Issues (if appropriate)

- \_\_\_\_ Legal and contractual requirements
- \_\_\_\_ Employee involvement
- \_\_\_\_ Negotiations
- \_\_\_\_ Potential for adverse outcomes
- \_\_\_\_ Union-Management relations climate

5. **Cost Implications.** Identify items with cost implications. Project an annual budget by:

A. Costing out the items requiring monetary support.

- \_\_\_\_ Grade distribution
- \_\_\_\_ Recruiting
- \_\_\_\_ Training, retraining, career development
- \_\_\_\_ Succession planning
- \_\_\_\_ Relocation costs
- \_\_\_\_ Increased or decreased staffing

## Appendix A Sample Workforce Plan

### HUMAN RESOURCE MODEL

#### Preliminary Preparation

This workforce analysis will be conducted using an example of a Human Resource Management office. ***Data used for this model is not from any existing database; it is fictitious data used for demonstration purposes only.*** We will demonstrate how to determine the future workforce needs for HR, based on anticipated changes in technology, organizational changes, and different skill set needed in the workplace.

The team of workforce planners for this project is three employees:

**Jane Doe**, Personnel Management Specialist

- Team leader
- Jane will be leading the workforce plan study and will work on the project full-time.

**Jill Adams**, Management Analyst

- Analyzing the workforce, statistics, and strategic plans – define future workforce
- Jill is on detail and will devote 95% of her time to this study.

**John Smith**, Personnel Management Specialist

- Analyzing the strategic plans, researching, and defining the future workforce. Provide expertise on HR issues.
- John is assigned to this study on a part-time basis two days a week.

## 1.0 Data Collection Step

### 1.1 Define Scope of Data – *Simulated Study*

#### **Scope:**

This agency is moving toward a more automated HR system that can potentially assume the same functions as current staff. It's likely that these changes will impact personnel processing units and staff, and the data support branches. Acquiring these systems may result in more streamlined services and reduction in FTE's.

This workforce plan will focus on the entire HR function for this agency and will be projected for the next five years. This study will consider all categories of employment, such as permanent, temporary, non-FTE's, contractors and volunteers. We will focus minimally on diversity and cultural issues, however statistical information regarding RNO and gender will be reported.

Data will be extracted from the Human Resources Information System, Data Warehouse, budget reports and strategic planning documents to assist us with the analysis.

## **1.2 Collecting existing documents:**

To understand this agency's vision, mission and workforce dynamics, we have collected and will use the following published documents and reports as a guide for this study:

- Strategic Vision for HRM
- National Academy of Public Administration (NAPA) Study
- Projected FTE report
- Arthur Anderson Report
- Strategic Plan
- Organization Chart
- Staff list

## **1.3 Examining the Data**

We analyzed the above documents to summarize the vision, goals, objectives and anticipated changes for the HR community. On the attached page, we have included a summary that outlines the agency vision and agency-wide initiatives that will have an impact on the services and workload of the Human Resources Office. In addition, we have reported the analysis of these anticipated changes on a table titled, "Examining the Data", which outlines specific areas that will need further staff planning based on the anticipated changes.

In the following table, we will address each impact in relation to skills affected and will use this information to plan and identify new skills, work processes, FTE's and services to be provided. The full report of this analysis is included.

## **REPORT OF FINDINGS**

**AGENCY MISSION:** To uncover new knowledge to improve health, prevent illness, and cure disease for all Americans.

**GOAL:** Although this agency has five specific goals, we have concluded that the one most specific to the HR field and the one that will be considered as part of our workforce planning is: **To ensure continued availability of highly qualified Biomedical and Behavioral Science Research Scientists.**

**VISION:** Strategic Vision for HR follows:

1. Tied and responsive to the scientific research enterprise
2. Creative, questioning, risk taking
3. Must foster, mirror and support the agency's organizational characteristics: creative, lean and non-hierarchical
4. Must be a high performing organization:
  - ☐ Empower people and organizations to act,
  - ☐ Built commitment to high quality services
  - ☐ Instill accountability to the public for good government

**ELEMENTS:** In conjunction with the mission, this agency will focus on the following elements:

- Mission driven
- Fair treatment and equality of opportunity
- Cost effectiveness
- Quality orientation and customer driven
- Flexible and simple
- Results rather than process oriented
- Empowered and entrepreneurial clients
- Productivity through people
- Action oriented

In addition to the HR Vision, our workforce planning analysis will be based on “**The New Paradigm**” for HR, which is the future direction for HR. According published documents, HR will be moving towards:

### **THE NEW PARIDIGM FOR HR**

<b><u>Current HR</u></b>	<b><u>Future HR</u></b>
<b>Personnel Office</b>	<b>HR Management</b>
<b>Case Driven</b>	<b>Customer Driven</b>
<b>Paper process</b>	<b>Automation of process</b>
<b>Command/Control</b>	<b>Creative flexibility</b>
<b>Hierarchical</b>	<b>Empowered teams</b>





We have identified potential agency-wide initiatives that will have a direct impact on services, personnel, budget, skills and future positions relating to the HR organization. These potential initiatives are outlined below and should be used to assist with planning for future positions in the HR field.

Below is a listing of the agency-wide initiatives that are reflected and analyzed in Table 1:

### **AGENCY-WIDE INITIATIVES**

#### **❑ Employee Relations Service Center**

This agency has developed a new concept for delivering ER services to components within this organization. Currently, the ER cases are handled internally and coordinated with OHRM. Implementing an Employee Relations Service Center will combine the tasks of ER into one central area, charging a fee to customers. In order to implement this, ER specialists will either need to transfer to the ER center or hire additional ER's for the service center

#### **❑ New Business System**

Currently, this agency uses a 30-year-old system using an antiquated computer applications system called COBEL to process the entire administrative processes of the organization. This system, known as the Administrative DataBase (ADB), is believed to be incapable of meeting the new technological challenges of the new millennium. Thus, this agency is in the process of creating a "New Business System" that will handle all aspects of the old system and expand its' capabilities to handle all current and future technological needs of the entire agency. This will include computerizing most of the administrative processes of this agency

#### **❑ Employee Express**

The Employee Express makes it easy for employees to process their own personnel actions using automation. Before EE, employees were required to submit forms and documentation to their servicing personnel office to process any changes in their personal benefits. The personnel office would do all the background work, process the paperwork, follow-up, provide advice and direction and finalized all of these personnel actions. Using Employee Express, the personnel office is no longer needed to process certain personnel actions for employees. The actions include changing/adding/deleting health insurance, thrift savings, allotments and tax withholding information. The agency plans to eventually expand its capability to include all personal actions into this system.

#### **❑ Data Warehouse System**

The data warehouse system (currently under construction and in pilot stage) makes it easier and user friendly to access various types of information from different computer systems housing the information. This is a one-stop process that allows you to access information from the many systems being utilized at this agency. It allows you to run reports, query's and ascertain information from a variety of administrative databases. Before datawarehouse, employees were required to submit forms to the customer support branch for any information needed. Thus, this system minimizes the operation of the customer support branch.

#### **❑ CareerHere**

The personnel office is required to post vacancies for this agency so that employees have access to vacancy announcements. Before CareerHere, personnel posted vacancy announcements on the web using a simple format to advertise jobs and provide information on how to obtain the announcements.

CareerHere, on the other hand, not only posts vacancy announcement, it provides a tool for employees to apply for jobs on line, provides the entire text of the vacancy announcement, and allows the employee to navigate through the system, viewing as many announcements as needed. CareerHere has minimized some of the work of support staff in personnel, as they are no longer needed to give basic information regarding announcements.

□ **Increase agency-wide staff by 1000**

Based on the strategic plan, this agency plans to increase staffing levels by 1000 for various fields and offices. Although the overall number (1000) is known, specific placement and specialty of the new hires is unknown. In order to plan for this increase, the disbursement and career fields needs to be identified. The impact on the HR function agency-wide will be considered.

## Examining the Data (analyzing the anticipated changes)

**TABLE 1**

Initiative	Potential Impact	Volume of work	Type of work	Org. structure	Mix of skills	Supervisory Ratio	FTE change	Workload
<b>Employee Relations</b>	Spec may leave. Multi level spec. New service fee	Decrease – work will go to service center	Higher level duties	Reduction in staff – eliminate some ER positions	N/A	Decrease- ER's may go to SC-very few left in HRM	Less employees in ER field, less needed in HR	More cases for service center. Less cases for HR offices.
<b>New Business System</b>	N/A	Increase in automated work.	Need less high level; less need for CSB.	N/A	IT skills will be needed	N/A	Decrease number of processing staff	Affected by use of computers. Actions processed faster. Less staff needed.
<b>Employee Express</b>	Less support staff/less processing staff	Less payroll type work needed	N/A	N/A	Data Entry skills will be needed/less HR skills	N/A	Less personnel support staff.	N/A
<b>Data-Warehouse</b>	Customer Support Branch	Less processing reports	No reports will be requested	N/A	N/A	N/A	N/A	Employee info will be easily accessible. No effect on workload.
<b>Career Here</b>	Support Staff	Different process 4 pstng jobs	No change	N/A	Data Entry Skills	N/A	Decrease in support staff	N/A
	Processing timecards eliminated	Decreased	N/A	N/A	N/A	ITAS Policy personnel needed	N/A	No changes in personnel/TK was an added duty for Staff



## **2.0 Assessment of Current and Projected Workforce**

Based on the assumptions mentioned and the Table 1, the following skills (overall) will be needed in the future:

- Ability to use HR Database systems
- Data Entry skills (new)
- Basic computer skills
- Manipulate data
- Skills in software applications
- Work independently
- Customer Service
- Flexibility
- Ability to handle multiple responsibilities
- Time management skills
- Decision making skills
- Analytical
- Written skills
- Computer skills

### **2.1 Data Assessment by Occupational Series**

We assessed our current workforce to determine the extent the current workforce would meet the needs of the future. In doing so, we analyzed the current workforce by series, grade, race, gender and retirements. The following is our analysis:

#### **ANALYSIS OF DATA:**

##### **1. Total number of employees: 52**

##### **2. Occupation breakdown:**

- ◆ Personnel Management Specialist, 201 series, 21 employees
- ◆ Employee Relations Specialist, 260 series, 8 employees
- ◆ Labor Relations Specialist , 233 series, 2 employees
- ◆ Personnel Asst., 203 series, 15 employees
- ◆ Management Analyst, 343 series, 1 employee
- ◆ Student, 299 series, 5 employees

##### **3. RNO Information:**

- ◆ WF -34.0%
- ◆ BF - 30.7%
- ◆ BM -11.5%
- ◆ WM- 9.60%
- ◆ AF - 7.70%
- ◆ HF - 1.92%

- ◆ HM- 1.92%
- ◆ AM- 1.92%

**4. Average Retirement Age:** 60 years old

**5. Retirement eligibility for current staff:** 12 employees are eligible to retire between now and 2003.

- ◆ 2000 - 5 (3 PMS, 2 ER)
- ◆ 2001 - 3 (2 PMS, 1 PA)
- ◆ 2002 - 2 (2 PMS)
- ◆ 2003 - 2 (1 MA, 1 PA)

The results of this analysis are documented on the following Gap Analysis form under “projected supply”.

[illegible][illegible]

### 3.0 Projected Workforce Needs

The following chart documents the current workforce, anticipates future need based on new initiatives, new skills needed, new programs, organizational structure changes, and explains the projected need.

Title	Series	Grade	FTE's needed	Current Staff	Gap	Comments:
<b><u>HEADQUARTER</u></b> Director	201	15	1	1	0	
PMS	201	14	3	3	0	
PMS	201	13	2	2	0	
ER	230	14	1	3	+2	Some ER's may go to service centers. This will reduce ER staff
P.Asst	203	06	1	2	+1	Due to technology, support staff will decrease.
LR Spec	233	14	1	1	0	
MA	343	13	1	1	-1	
Comp spec	334	13	1	0	-1	Due to the many changes in technology/new systems, a CS is needed
<b><u>COMP A</u></b> PMS	201	13	4	3	-1	Will need more PMS versus Staffing specialist
ER	230	13	2	2	0	
P. Asst	203	5	1	1	0	
<b><u>COMP B</u></b> PMS	201	13	2	1	-2	Will need more PMS's due to phasing out of Staff Spec
PMS	212	13	0	3	+2	This series will be phased out-eliminated by 2003
ER	260	13	1	1	0	
P. Asst	203	5	1	1	0	
Student	299	4	1	1	0	
<b><u>COMP C</u></b> PMS	201	13	2	2	0	



ER	260	13	2	0	+2	Increase in ER workload due to service center
P. Asst.	203	5	1	1	0	
Student	299	4	1	1	0	
PMS	212	13	1	1	0	
<b><u>COMP D</u></b> PMS	201	13	3	3	0	
PMS	201	12	1	1	0	
PMS	201	11	1	1	0	
P. Asst	203	5	1	1	0	
<b><u>COMPE</u></b> PMS	201	13	0	2	+2	Processing function being distributed to other comp. Due to automation, function gone by 2002
P. Asst	203	6	0	8	+8	Processing function being distributed to other comp. Due to automation, function gone by 2002

The information documented above (in the chart) is outlined on the following Gap Analysis form under "Projected Need".



**Example: Gap Form with Projected Need**

[illegible]

**GAP Analysis Forms:**

We have provided several examples of the GAP Analysis Form to illustrate that workforce planning can be simple or complex, depending upon the needs of the organization.

The following contains a:

- Detailed model in which all positions in a HR functional area are analyzed over a five year period
- Consolidated model that combined the same series within the HR functional area and are analyzed over a five year period
- Consolidated model that combined the same series within the HR functional area and are analyzed for one year.

## Detailed Model

[illegible]

## Detailed Model -- Continued

TITLE	Series	FPL	FTE	Base	Projected Supply					Projected Need					GAP (+ or - no. of positions)					Reason for Action/Comment
				Line	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	2000	2001	2002	2003	2004	
Component C:																				
Pers. Mgmt. Spec.	201	13	2	2	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	
Staffing Specialist	212	13	3	3	3	3	3	3	3	1	0	0	0	0	-2	-3	-3	-3	-3	Need generalists and more ER specialists
ER Specialist	230	13	2	2	0	2	2	2	2	2	2	2	2	2	-2	0	0	0	0	Increase in ER workload
Labor Relations	233	13	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	
Personnel Asst.	203	5	5	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	
Component D:																				
Pers. Mgmt. Spec.	201	13	5	5	4	5	4	5	5	4	5	4	5	5	-1	0	-1	0	0	Has heaviest workload; Incumbents responsible for SES program and employment
Personel Asst.	203	5	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	
Student	299	4	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	Graduates in 2001; studied computer science
Component E:																				
Pers. Mgmt. Spec.	201	13	2	2	2	2	0	0	0	2	1	0	0	0	0	1	0	0	0	Processing function being distributed to other comp. due to automated system; function to be gone by 2002
Personnel Asst.	203	6	8	8	8	8	8	8	8	8	4	0	0	0	0	4	8	8	8	Processing function being distributed to other components due to automated system; function to be gone by 2002

## Consolidated Model

[illegible]

[illegible][illegible]



## **APPENDIX B Glossary of Terms**

### **Action Item**

Specific activity within the WFP Action Plan assigned to an individual or group for completion within specified time frame.

### **Action Plan**

A collection of specific activities, which will address the significant WFP gaps as identified in the gap analysis form.

### **Attrition**

The reduction of staffing levels from an organizational level due to resignations, reassignments, transfers to other agencies, deaths, etc., in a fiscal year. Retirements are normally included in attrition, however, it will be projected separately in the WFP process.

### **Baseline**

The total number of staffed, permanent positions identified at the beginning of the WFP process.

### **Competency**

Underlying characteristic of an employee (traits, skills, body of knowledge, etc.)

### **Full Performance Level (FPL)**

The fully functional grade level of a properly classified position.

### **Full-time Equivalent (FTE) Employment**

The total hours worked divided by 2087 hours. FTE is projected on a full fiscal year basis. One FTE is equivalent to one staff year.

### **Gap**

The difference between projected positions and human resources supply. It can be a positive number indicating surplus workforce or a negative number indicating unmet projected positions.

### **Human Resource Need**

Organization's forecast of needed staff size and skill mix for the designated planning period.

### **Occupational Series**

A numerical designation given to position(s) which have similar specialized work and qualification requirements.

### **Organizational Level**

The administrative subdivision to which an employee is assigned

**Permanent Workforce**

Consists of all permanent positions (full-time and part-time) within the workforce.

**Projected Positions**

Based on budget expectations the projected skills and tasks identified by series, title and FPL grade necessary to achieve the work of the agency.

**Projected Workforce Need**

Organization's forecast of needed staff size and skill mix for the designated planning period that will be needed to conduct the work in the future.

**Projected Workforce Supply**

The projected number of employees by series, title, and FPL grade available in the future based on projected retirements and attrition trend data.

**Retirement Projection**

The number of employees anticipated to be lost due to an average age of retirement over a time period.

**Skill**

An observable and measurable expertise needed to perform a task.

**Staffing Assessment**

The determination by the organization of the ideal staff size and skill mix needed to carry out its strategic objectives.

**Strategy**

An approach to addressing an issue.

**Surplus –**

The amount by which the supply exceeds needs.

**Workforce Planning**

A process which ensures that the people with the appropriate skills are in the right place, at the right location, at the right time to meet the customers' changing needs. It examines what an organization needs to accomplish in a given period of time; what knowledge, skills, and experience are required to get the job done; and how large and what type of workforce is required to provide that mix of skills, knowledge, and experience.

**Workforce Planning Team**

A group of individuals with multi disciplinary backgrounds from the agency involved in activities within their respective organizational level and who can ensure the right skills are in the right location at the right time to meet conservation issues.

## APPENDIX C References and Sources

- ◆ *“Building Successful Organizations, Workforce Planning in HHS,” Draft, Office of Human Resources, Assistant Secretary for Management and Budget, June 1999*
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- ◆ *“Workforce Planning Guide” Natural Resources Conservation Service, U.S. Department of Agriculture, July 1999*
- ◆ *Workforce Planning Policy, U.S. Department of Agriculture, 1996*
- ◆ *“Workforce Planning Guide,” U. S. Department of Transportation, April 1999*
- ◆ *“Beyond 2000,” Air Force Personnel, U. S. Department of Air Force*
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# ***WORKLOAD ANALYSIS GENERAL CONCEPTS***

## **WORKLOAD ANALYSIS**

Workload analysis is viewed as a separate set of processes that contribute to workforce planning. As such, this section provides general information and basic steps when conducting workload analysis only.

# **WORKLOAD ANALYSIS**

## **What is Workload Analysis?**

Workload analysis is a descriptive baseline of the workload requirements by discipline in an organizational unit. It will provide leadership with a process to assist with allocating resources, communicating priorities, and identifying skills and training needed by employees to accomplish the workload.

Once an organization completes an accurate assessment of the work and the staff required to complete the work, then management can discuss longer-range resource priorities and staffing needs based on realistic resource improvement goals and staffing requirements. Plans can be developed to allocate funding to filling gaps, improve operating efficiencies, and improve technical skills and competency.

## **Uses for WLA:**

- Management decision making tool
- Analyze workload by activity, discipline needs, current location of specialists, and where staff is needed to address emerging issues.
- Analyzing current work processes and discuss potential ways to improve efficiency and effectiveness.
- Provide supporting data to tie the costs of program to social, economic, and medical research benefits.
- Facilitate discussion and review of priorities associated with work products.
- Project impacts of new or additional programs and mandates on current and future workload and workforce.
- Provide data to tie workload and personnel needs to more comprehensive resource assessments.
- Help managers determine how to reduce excessive or uneven workload.
- Assist in the development of training needs for employees.
- Provide human resource data when organizational changes are being considered.
- Project what disciplines will be needed for the future workforce
- Assist in the development and evaluation of performance measurements.
- Provide supporting data in resource allocation decisions.
- Produce database of work process for future reference

## **How should it be conducted?**

Workload analysis should be conducted in two parts. The first major part is to determine both the total amount of work activities needed and what will be accomplished within the next fiscal year in each organizational unit. For each work activity, a measurement unit (number), the source of the data to use (if applicable), and any additional considerations for clarity, consistency, and accuracy.

The second major activity is to determine the amount of time required to complete the work activities by discipline. For each work product, a time analysis should be conducted. The time analysis consists of documenting the time required by different disciplines to carry out tasks needed to accomplish the work activity.

**Basic WLA model is:**

Time Data x Number of work activities next year = Total Time Required

To determine staffing levels (FTE) required:

Total Time Required / 2080 hours = FTE Workforce Required.

**Verification of data:**

To check the reasonableness of the time study data, estimate the progress of each activity for last year, then multiply the time study data. The result should be the approximate workforce that existed last year.

Time study Data x Work activity for last year = Total Time Required for last year

To determine workforce (FTE) required:

Total time Required / 2080 hours = FTE Workforce required for last year.

The reasonableness test of using last year's accomplishments to compute the number of staff that is required to complete the workload should provide a basic check of the time study data. If the time study data is reasonable, then the staff required to complete last year's progress on each activity should approximate last year's workforce. If the time study numbers are too high then the model will show that more staff was required than was available to complete last year's workload.

**Identification of time by discipline:**

Record the discipline skills necessary to accomplish the work activity. The working title of the individual currently in the position is not relevant to this process, but the skills needed to complete the activity should be captured. For example, a microbiologist may be a biologist by training. If the microbiologist acts as a biologist accomplishing a work activity, then record that time in the biologist column of the spreadsheet. Use the same methodology for all disciplines used in the organization.

In completing the worksheet, it may be necessary to consider the various employee titles of the organization, however, place the employees in the most applicable category, depending upon the skills needed to accomplish the work activity.

It is recognized that there may be variations in the amount of time required for each work activity. A typical unit (type and/or size) must be determined and all time identified as it relates to this typical unit.

Please pay attention to those tasks, steps, or components that should be counted in other work activities. This will avoid duplication of time between activities. Care should be exercised to prevent double counting.

In order to get a comprehensive accounting of total time required to complete a work activity, it is important that all time, including that of other employees, nonFTEs, volunteers, are included.

### **LIMITATIONS OF WLA**

- It is only an estimate of the workload
- Estimates are only as good as the “estimators”

## EXAMPLE OF WORKSHEET TO ESTIMATE TIME

**Work Product:** \_\_\_\_\_

**Typical Size Unit:** \_\_\_\_\_

**Describe typical unit and assumptions used:**

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---

---

---

**Typical practices/activities:**

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---

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<b>Task (Per Unit)</b>	<b>Time (Staff hours)</b>
----------------------------	-------------------------------

A.	_____
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-	_____
---	-------

-	_____
---	-------

-	_____
---	-------

-	_____
---	-------

-	_____
---	-------

-Other:	_____
---------	-------

_____	_____
-------	-------

B.	_____
----	-------

-	_____
---	-------

-	_____
---	-------

-	_____
---	-------

-Other:	_____
---------	-------

_____	_____
-------	-------

<b>TOTAL PLANNING TIME (Staff Hours/Unit)</b>	_____
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## **EXAMPLE OF WORKLOAD ASSESSMENT – ACQUISITIONS**

Assessing the current workload involves reviewing financial analysis and analyzing the performance measures. This analysis will answer two issues: (1) are you efficient compared to your operating costs; and (2) are you performing within the realm of your goals and objectives. This information will help managers understand their workforce needs by examining the work output against the work inputs. It will also identify areas of improvement based on the results from measuring the organization performance. This could include: identifying additional FTE's, delegating work, increasing work, increasing efficiency among employees and/or setting new standards of performance.

### **PART 1**

#### **Cost Effectiveness**

This part of the document focuses on analyzing the financial aspects of specific functions. Below, the Acquisitions field is used only as an example of how to submit adequate data for analyzing your operations cost effectiveness and resource utilization.

### **DATA COLLECTION**

#### **Questions**

1. List all applicable expenses for overhead, FTE's etc.:  
For example: In Acquisitions, this would apply to both Central Procurement and any Service Center in order to demonstrate consistency in the charges. To compare the efficiency, service, and cost effectiveness of these services, please include all costs associate with your fee for processing procurement orders, such as: Rent charges, Utility charges, Training, Equipment, policy, protest administration and FTEs total cost.
2. Are you allotted an appropriated budget?
3. What percentage of your appropriated budget covers overhead?
4. Do you charge a Fee-for-Service? What is the Fee?
5. What percentage of each overhead charge is included in the "Fee"
6. Doe this "Fee" include all employees in the 1100 series or only actual employees processing contracts?
7. Name the services that you provide (in general). Which of these services are included in the fee?
8. What type of contracts do you process and how long does it take to process each?
9. Is the fee standard for all contract types?
10. What is the level of difficulty of each type of contract? For example: Contract Type A – 30 days to process; Contract Type B – 10 days to process; Contract Type C – 9 days to process
11. For the contract types above, what grade level of specialist processes each?
12. How many actions (each type) were processed this fiscal year? Last fiscal year?
13. How many actions do you process monthly?
14. What were the dollar amounts of each contract type?

**MEASURING:**

In order to measure your work output and inputs, you need to establish units of measure. The following assists in determining what units to use for measuring.

To Quantify:

1. How many contracts processed?
2. Per type of contract
3. Dollar amount for each type

Unit of Measure:

Contracts completed per type

Analyzing the output (actions processed):

1. How many contracts submitted?
2. How many processed?
3. How many customers (ICD's, internal, etc)?

Analyzing the input (resources)

1. How many FTE processing contracts?
2. How many FTE in series but are not processing contracts?

For example: To process contracts, the following are units of measure:

- Number of customers
- Type of contracts processed (What kind?)
- Pre-established timeframes
- How many specialists worked on a particular contract?
- Level of difficulty for contract

Note: The above data, collected and analyzed, will answer the following questions: Is the amount of output (contracts processed) sufficient to the fees charged and resources used?

**PERFORMANCE GOALS:**

This part of the document focuses on analyzing whether you are meeting your performance goals. Question 1 through 7 will determine whether you are meeting your goals:

Questions

1. What are your performance goals per contract? Per action?
2. How many actions do you process per week?
3. Do you track the number of actions processed?
4. If yes, how do you track actions processed, such as by type?
5. How much do you anticipate collecting each year from fee? How much do you actually collect?
6. Is there a Gap in expected revenue?
7. How do you address the Gap?

## PART 2

Analyzing the data from Part 1 and using the formulas below, you can measure your efficiency level.

### Measuring Efficiency:

Units of Measures:

Outputs

- Contracts Processed (unit of measure)

Input (use a unit for the resources) used that is the most meaningful)

- FTE's
- Staff hours
- Square feet
- Hours of use
- Dollars

For input, include all resources (FTE) used in producing an output (processing contracts) by using cost in terms of dollars. For example: Give the total cost per FTE.

To measure levels of efficiency, use the formula below:

To determine Unit Cost:

Use dollars as input; Work completed as output

Formula to use to determine unit costs:

$$\text{Unit Cost} = \text{Costs (Resources Used)} / \text{Output Quantity}$$

To determine Productivity Ratios: (Expressed as “output per units of input”)

Use resource quantity as input; work units completed as output

Formula to use to determine productivity rate:

$$\text{Output} / \text{Resource Quantity used} = \text{Productivity Rate}$$

Example: Contracts processed per month divided by the number of contract specialist

To determine Productivity Indices: (Expressed as a measure of the change over time of the quantity of products or services produced (output to the quantity or cost of resources used in production (Input).

Formula to use to determine productivity indices:

$$\text{Change in output} / \text{change in input} = \text{Productivity index}$$

(contracts processed decreased) / (number of specialist changed)

OR

$$\text{Index of output} / \text{Index of Input} = \text{Productivity index}$$

To determine Operating Costs to Transaction Dollar (A unique productivity ratio, usually expressed as a percentage)

- Use dollars as inputs; dollars as output; output dollars are a proxy indicator of work done.

Formula to use to analyze operating costs to transaction dollars

$$\text{Operating cost (FTE costs)} / \text{Transaction Dollars} = \text{Efficiency Rate (how much does it cost per contract)}$$

Examples:

- Operating costs as percent of sales
- Operating costs as percent of benefit payments
- Operating costs as percent of taxes collected

To Determine Resource Utilization (show the usage rate of a given resource. This would be used for critical resources)

Formula to use to determine if resources are utilized efficiently

$$\text{Amount used} / \text{total available} = \text{usage rate}$$

Example: Two out of 10 contract specialist worked on a project.

# ***COMPETENCY/SKILLS ASSESSMENT GENERAL CONCEPTS***

## **COMPETENCY/SKILLS ASSESSMENT**

This type of analysis is viewed as a separate set of processes that contribute to a quality workforce plan. Because we focused strictly on workforce planning processes and not separate, but related processes such as competency analysis, we have included this section to provide a basic understanding.

## **COMPETENCY ANALYSIS**

### **What are competencies?**

Competencies are a set of behaviors that encompass skills, knowledge, abilities, and personal attributes that, taken together, are critical to successful work accomplishment. Competencies may be defined organizationally or on an individual basis. Identifying competencies on an organizational basis provides a means for pinpointing the most critical competencies for organizational success. These are an organization's core competencies.

Individual competencies are those that each employee brings to his or her function. Individual and team competencies are critical components of organizational competencies. If the individual competencies in the workforce are not in accord with those needed by the organization, workforce planning will point out these gaps.

### **What is a competency model?**

A competency model is a map to display a set of competencies that are aligned with an organization's mission, vision, and strategic goals. The competency model is future-oriented, describing an ideal workforce. The competencies that make up the model serve as a basis for employee management, since they play a key role in decisions on recruiting, employee development, personal development, and performance management.

A competency model helps bridge the gap between where an organization is now and where they want to be in the future. This occurs in two ways. First, the competency model serves as a guide for management in making decisions, since it is based on the competencies that support the mission, vision, and goals of the organization. Second, the competency model serves as a map to guide employees toward achieving the mission of their organization and their functional area. This provides management and staff with a common understanding of the set of competencies and behaviors that are important to the organization. A well-developed and documented competency model will serve as the basis for organization training and development activities as well as the means for identifying competencies to be sought in new recruits.

### **How are competencies identified?**

Competencies are developed based on information collected by studying what top performers do in the defined job context. Competencies focus on the attributes that separate the high performers from the rest of the workforce. Information can be gathered in a variety of ways, including employee questionnaires, focus groups, and interviews with managers and employees.

### **Two key elements in identifying competencies are:**

Workforce skill analysis, process which describes the skills required for today's work. Conducting workforce skill analysis requires the leaders of an organization to anticipate how the nature of the organization's work will change, and then to identify future human resource requirements. (This process spans the supply and demand analysis aspects of workforce planning.)

- **Job Analysis**, which collects information describing successful job performance. Job analysis focuses on tasks, responsibilities, knowledge and skill requirements as well as other criteria that contribute to successful job performance. Information obtained from employees in this process is used to identify competencies.

Workforce planners can use competency analysis as a method of analyzing workforce gaps. Competency analysis is a process that identifies the current competency levels of the workforce, as well as the competencies required by the jobs of the future. As a part of competency analysis, planners can distribute a questionnaire (individually, by groups, or via e-mail) to employees at large or in positions that are subject to significant change in order to collect skills and education data and to assess their qualifications.

The competency analysis will help planners to determine if it is possible to retrain these employees so that they may develop the competencies that the organization will require in the future. Timing and presentation of such a questionnaire is critical.

### **Steps for Conducting Competency Analysis:**

1. **Identify the job competencies that will be required for future positions in the organization.** A competency matrix can be used as a tool for identifying the competencies that are or will be required for specific positions. This step will probably have been conducted during the strategic planning and preliminary data gathering step in the workforce planning processes.
2. **Determine whether current employees possess the competencies that will be required by the identified positions.** This is the data that will probably be missing or available only in anecdotal methods or based on assumptions related to current series and grade. A skill assessment tool can be used to measure individual employee competencies.
3. **Analyze the difference (if any) between current employee competencies and future organizational needs.**

The results of the competency analysis will help identify potential retraining needs that employees in certain “excess” or “surplus” positions may require in order to transition into other positions within the organization. Employees may also want to know the results of the analysis for their own career development purposes. This may be helpful for retention if well-qualified current staff believe there are growth and learning opportunities for them within the organization.

If the organization determines that current employees will not have the ability to attain the competencies that will be required in the future, workforce planners will then need to identify the most appropriate recruitment strategies for filling the skill gap.

**Competency Matrix\***

<b>B-Basic I=Intermediate A=Accomplished</b>	<b>Job A</b>	<b>Job B</b>	<b>Job C</b>	<b>Job D</b>	<b>Job E</b>
<b>Good Communicator:</b> -Listening -Presentation-Formal -Oral -Written	B	A	A	B	I
<b>Self Management:</b> -Time Management -Stress Management -Assertiveness	A	B	I	A	B
<b>Interpersonal Skills</b> -Conflict Management -Teamwork -Negotiating	A	I	B	I	I
<b>Leadership</b> -Team building -Coaching -Change Management	B	B	I	A	A
<b>Management</b> -Financial -Human Resources -Technology -Info. Management	B	I	A	B	A

\*Note: This competency matrix is intended to be a generic model. Planners should adapt or adjust competency models and matrices to correspond to organizational needs and characteristics. *(Tool Adapted from U.S. Department of Transportation, Office of Human Resources Management)*



### Skills Assessment Tool:\*

The following is an example of an assessment tool that measures skills in each competency. In order to develop a well-rounded analysis, it is recommended that an employee complete the assessment and have the supervisor and at least one peer complete the assessment of that individual with respect to these skills.

Once all individual assessments are completed, compile all results on a single table and refer to analysis instructions below for completion of “Level Required for the Position” and “Areas to Improve” columns, and interpretation of results.

#### Directions:

In the table below, indicate the appropriate measure assessing the skill exhibited for each area.

**1 - Basic level of Skill;** Has knowledge of general terms, concepts, processes and objectives relative to competency

**3 - Intermediate level of Skill;** Has ability to apply competency to perform common tasks

**5 - Accomplished level of Skill;** Uses competency to perform common tasks.

**0 - Indicates need for basic skill development**

Leave Blank - A skill cannot be assessed

Competency	Self Assessment (0 to 5)	Peer or Employee Assessment (0 to 5)	Supervisor Assessment (0 to 5)	Level Required for Position (B, I, or A)	Area to Improve
<b>Good Communicator:</b> -Listening -Presentation-Formal -Oral -Written					
<b>Self Management:</b> -Time Management -Stress Management -Assertiveness					
<b>Interpersonal Skills</b> -Conflict Management -Teamwork -Negotiating					
<b>Leadership</b> -Team building -Coaching -Change Management					
<b>Management</b> -Financial -Human Resources -Technology -Info. Management					

\*Note: This skills assessment tool is intended to be a generic model. Organizations should adapt the tool to correspond to their needs. (Tool Adapted from U.S. Department of Transportation, Office of Human Resources Management)

## ANALYSIS OF INFORMATION

In the column marked “Level Required for Position”, an employee should indicate the appropriate level for his/her position ( basic, intermediate or accomplished) by referring to the proficiency level grid in the framework. Remember: Accomplished (A)=5, Intermediate (I)=3, and Basic(B)=1.

Place a ✓ in the rows where two of the three (or both if you only have two columns completed) assessments of your skills fall below the required proficiency level for your role as identified in the skill requirements grid in this framework. For example, if your role requires an intermediate level of skill (3) in Technical Knowledge and you rated yourself a 2, your supervisor a 3, and your peer a 1, you should mark that row with a ✓. This identifies a need for development in that competency. This information should then be used, with your supervisor to develop an improvement plan.